What is claimed is:

1. A free draining throttling valve comprising:

(a) a valve body defining an inlet and an outlet;

(b) a throttling surface between said inlet and outlet, said throttling surface comprising an island having a generally annular peripheral surface;

(c) a diaphragm having a primary surface and a secondary surface, said surfaces being spaced-apart and being joined at peripheral edges to form an internal diaphragm volume chamber;

(d) said primary surface defining a mating throttling surface engageable with said island;

(e) drive means on said diaphragm;

(f) operator means cooperable with said drive means for selectively positioning said diaphragm between an open flow control position in which a throttling gap is established in which a linear pressure drop occurs with increasing flow velocity and a flow blocking position in which the primary diaphragm closes off flow at said island.

2. The valve of claim 1 wherein a weep hole extends through said valve body into said diaphragm chamber.

3. The valve of claim 1 wherein said island has tapered side walls and said throttling gap is between said side walls and said throttling surface.

4. The valve of claim 1 wherein said drive means comprises a threaded shaft on said diaphragm and wherein said operator means comprises a motor driven rotor in threaded engagement with said drive means.

5. The valve claim 4 wherein said rotor is mounted in thrust bearings captured between the rotor and housing.

6. The valve of claim 1 wherein the valve body is a corrosive chemical resistant material.

7. The valve of claim 1 wherein said body has an upper and lower section and said diaphragm is retained therebetween at said edge of said diaphragm.

8. The valve of claim 4 wherein the roter is driven by a stepper motor.

9. The valve of claim 4 wherein said rotor is biased to provide a pre-load to oppose fluid pressure.

10. The valve of claim 1 wherein said diaphragm surfaces are provided with annular ripples that deform as the diaphragm flexes.

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